What is claimed is:

1. A rear-view monitor for use in vehicles, comprising:

vehicle-mounted image pickup means for picking up images of road in the rear of one's own vehicle at every fixed time; and

detection means for detecting an overtaking vehicle by processing road images obtained by the image pickup means,

wherein relative movement between one's own vehicle and the overtaking vehicle detected by the detection means is monitored,

the image pickup means contain a wide-angle high resolution camera, and

the detection means include:

first image processing means for processing the whole road images obtained by the image pickup means by sampling image data;

second image processing means for processing a part of road images obtained by the image pickup means without sampling image data; and

selection means for selecting either the first image processing means or the second image processing means in response to a situation of traffic.

2. The rear-view monitor for use in vehicles according to claim 1, wherein the selection means select:

the first image processing means when the detection means detects other vehicle in the vicinity of one's own vehicle;

the second image processing means when the detection means detects no other vehicle in the vicinity of one's own vehicle; and

the first image processing means at a low repetition rate at the time when the second image processing means being selected.

3. A rear-view monitor for use in vehicles, comprising:

vehicle-mounted image pickup means for picking up images of road in the rear of one's own vehicle at every fixed time; and

detection means for detecting an overtaking vehicle by processing road images obtained by the image pickup means,

wherein relative movement between one's own vehicle and the overtaking vehicle detected by the detection means is monitored,

the monitor further contains blink detection means for detecting blinks of winkers and an operated side thereof,

the image pickup means contain a wide-angle high resolution camera, and

the detection means include:

first image processing means for processing a left-hand side of road images obtained by the image pickup means;

second image processing means for processing a right-hand side of road images obtained by the image pickup means; and

selection means for selecting alternatively the first image processing means and the second image processing means and maintaining selected image processing means that correspond to a direction to which the winkers are operated when the blink detection means detects the operation of the winkers.

Sub a4. A rear-view monitor for use in vehicles, comprising:

vehicle-mounted image pickup means for picking up images of road in the rear of one's own vehicle at every fixed time; and

optical flow detection means for detecting an optical flow of other vehicle determined by successive two road images obtained at every

fixed time by the image pickup means,

wherein the monitor keeps monitoring relative movement between one's own vehicle and an overtaking vehicle using the optical flow detected by the optical flow detection means,

the image pickup means contain a wide-angle high resolution camera, and

the optical flow detection means include:

first image processing means for processing the whole successive two road images obtained at every fixed time by the image pickup means by sampling image data;

second image processing means for processing a part of road images obtained by the image pickup means without sampling image data; and

selection means for selecting either the first image processing means or the second image processing means in response to a situation of traffic.